

Amendments to the Drawings:

Attached hereto please find two replacement drawing sheets. The replacement drawing sheets include amended figures 1 and 4, which replace the original figures 1 and 4.

REMARKS

Claims 1-5, 6 and 10 have been amended. Claims 7-9 and 11-13 have been canceled without prejudice. Claims 1-5, 6 and 10 remain pending in the application. New claim 14 has been added.

Drawings

The drawings are objected to because they fail to label the reference numerals according to their functions; all of the reference numerals require a corresponding textual label in addition to the numeric label.

In response to the drawing objections, applicant has carefully amended figures 1 and 4 in order to overcome the objections. Amended figures 1 and 4 are believed to correctly label corresponding textual labels in addition to the numeric labels.

Claim Objections

Claims 6 and 10 are objected to because of the informalities as follows. In claim 6, line 2, "EFT" should be "FET." In claim 10, line 3, "EFT" should be "FET."

In response to these objections, applicant has changed "EFT" to field effect transistor in amended claims 6 and 10.

Claims 6 and 10 have also been amended in respect of other minor informalities. Applicant requests that the objections to claims 6 and 10 be

withdrawn.

Claim Rejections under 35 U.S.C. 112

Claims 8-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

By the above amendments, applicant has canceled claims 8-9 and 11-13 without prejudice, and has incorporated the substance of the limitation(s) of claims 11-13 into amended independent claim 10.

Claim 10 is assumed to remain subject to the rejection, and applicant respectfully traverses the rejection as follows:

Amended claim 10 now recites "comparing the signals respectively from the modulation signal source and the wave generator in the comparator, and outputting a positive high level signal so as to turn on the field effect transistor."

It is submitted that the claim language now provides complete functional relationships of a wave generator and a comparator with the other steps in the method of providing a driving current to a light emitting diode array. That is, it is believed that the claim particularly points out and distinctly claims the subject matter. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections Under 35 U.S.C. 103

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyaki et al. (US Pat. 5,604,759) in view of Boytim et al. (US Pat. 6,744,987).

By the above amendment, applicant has canceled claims 7-9 without prejudice. In response to the rejection, applicant submits that amended claims 1-6 are allowable over Miyaki et al in view of Boytim et al, as follows:

Amended claim 1 recites in part:

A pulse width modulation driving apparatus for a light emitting diode, comprising...a first current limiting resistor and a second current limiting resistor...wherein...**the first resistor** is connected between the power supply and the source terminal of the field effect transistor, and the drain terminal of the field effect transistor outputs a driving current through the **second resistor** to the load.

Applicant submits that even if the combining of Miyaki et al and Boytim et al is proper, amended claim 1 still has novel and unobvious physical features over the stated combination.

The combination may be considered to constitute a resistor 114 coupled between a cathode of an LED 112 and a drain terminal of an FET 116...(column 3, lines 56-58, in Boytim et al). However, the combination does not disclose or suggest the limitations whereby **“the first resistor is connected between the power supply and the source terminal of the field effect transistor, and the drain terminal of the field effect transistor outputs a driving current through the second resistor to the load,”** as recited in amended claim 1. That is, the

combination does not disclose or suggest a first and a second resistors, with the second resistor being connected to an anode of the load. Accordingly, the combination clearly fails to teach or suggest the pulse width modulation driving apparatus as recited in amended claim 1.

Moreover, applicant submits that the novel physical features of amended claim 1 produce new and unexpected results over any combination of Miyaki et al and Boytim et al. Namely, when the field effect transistor is turned on, the power supply, the first resistor, the field effect transistor, the second resistor and the LED array cooperatively form a closed series loop, and the driving current of the LED array can be precisely controlled because of its capability of linear adjustment.

Thus applicant submits that amended claim 1 is unobvious and patentable under 35 U.S.C. 103(a) over the cited references. Reconsideration and withdrawal of the rejection and allowance of amended claim 1 are respectfully requested.

Amended claims 2-5 all depend directly from amended claim 1, and therefore should also be allowable.

Amended claim 6 recites limitations similar to those of amended claim 1. For reasons similar to those asserted above in relation to amended claim 1, applicant submits that amended claim 6 should also be allowable.


New claim 14 has been added. This claim depends directly from amended claim 10. In view of the above remarks regarding amended claim 10, new claim 14 is believed to be patentable and in a condition for allowance.

In view of the foregoing, the present application as claimed in the pending claims is considered to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,

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